Ben Nachmanson

November 7, 2021

Project 5 Design Document

1. Requirements Document.

We learned how to connect a DC motor with a fan to a module and use Bluetooth or buttons to control its speed.

The launchpad will be connected to a DC motor and Bluetooth module. We will be able to control the DC motors speed with the onboard buttons or send data using Bluetooth. The onboard light will be on when the fan is running, and you can click both buttons to turn off the fan.

The most difficult aspect of this project was trying to set up an interrupt for Port E. I decided to not do that and then just used the onboard switches for the kill switch (both clicked at the same time). PA5 was controlled by periodic interrupts, PF4-0 updated using edge triggered interrupts and the DC motor was sped up and slowed down by different levels of power.

Diagram

Description automatically generated Diagrams:

Diagram, schematic

Description automatically generated